

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P838599

Luminaire Tested: HCSQ640D010-HM63040930-61SQC

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838599
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ640D010-HM63040930-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

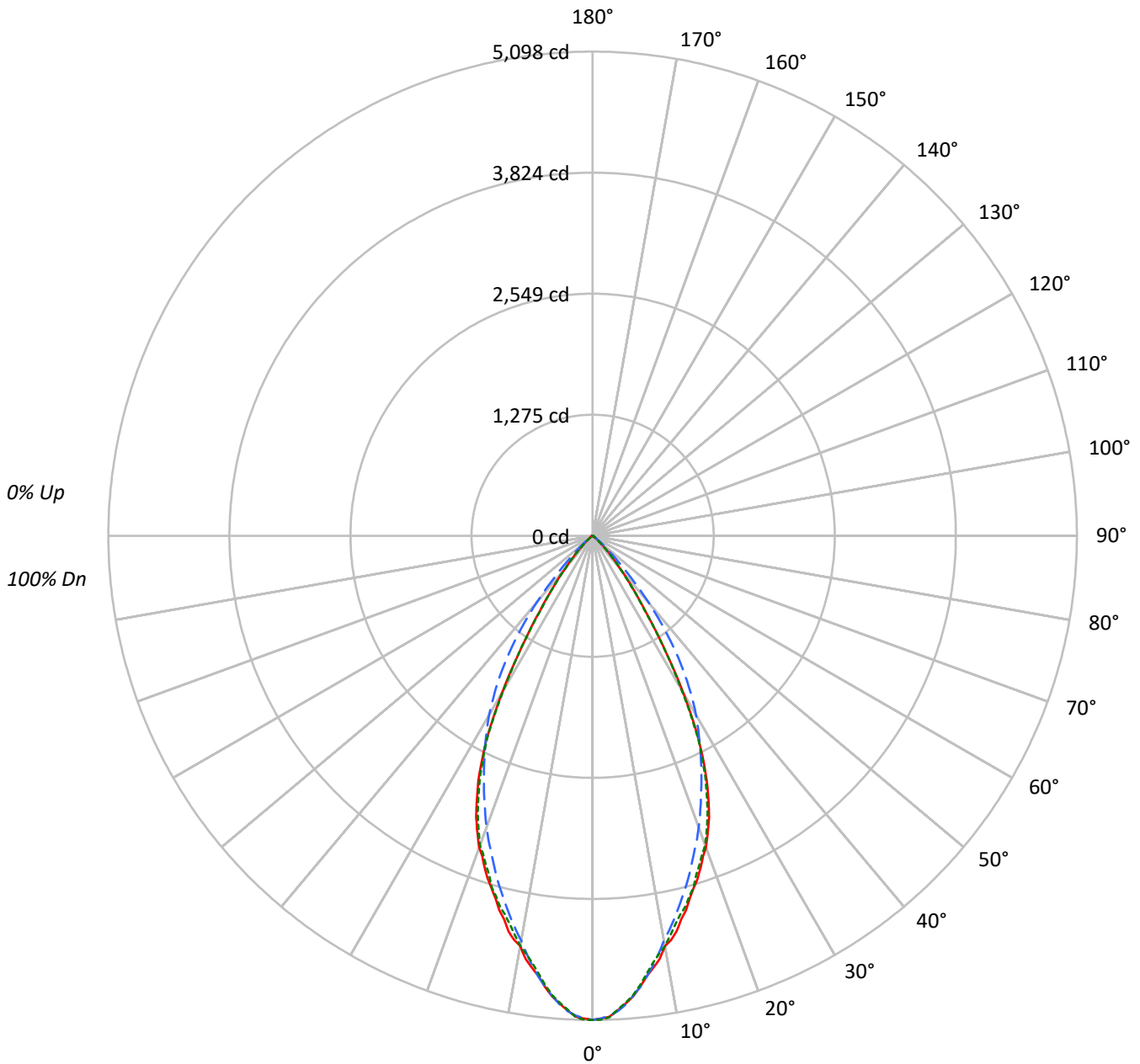
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3818.8 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 41
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	114	111	108	106	111	109	107	105	105	103	101	101	100	98	98	96	95	94																			
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	97	92	88	101	95	91	87	93	89	86	90	87	84	88	85	83	81																			
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	78	76																			
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71																			
6	88	80	74	70	87	79	73	69	77	72	69	76	72	68	75	71	68	66																			
7	84	75	69	65	83	74	69	65	73	68	64	72	67	64	71	67	64	62																			
8	80	71	65	61	79	70	65	61	69	64	60	68	64	60	67	63	60	59																			
9	76	67	61	57	75	66	61	57	65	60	57	65	60	57	64	60	56	55																			
10	73	63	58	54	72	63	57	54	62	57	54	61	57	53	61	56	53	52																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	219515	219515	219515
5°	210564	210197	209903
10°	191782	189176	191633
15°	176248	169798	175187
20°	159949	149649	158854
25°	135180	128629	133318
30°	94650	108282	93039
35°	50837	83063	49854
40°	25174	51394	24978
45°	10991	21671	10784
50°	3537	7870	3537
55°	1787	2560	1659
60°	1171	1171	1171
65°	866	866	866
70°	642	642	642
75°	566	566	566
80°	422	422	422
85°	840	840	840

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 21671 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	447.7	11.7
10°-20°	1081.1	28.3
20°-30°	1248.8	32.7
30°-40°	779.9	20.4
40°-50°	216.7	5.7
50°-60°	30.3	0.8
60°-70°	8.9	0.2
70°-80°	3.8	0.1
80°-90°	1.6	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2777.6	72.7
0°-40°	3557.5	93.2
0°-60°	3804.4	99.6
0°-90°	3818.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3818.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5098	5098	5098	5098	5098	
5°	4872	4858	4863	4857	4857	449
15°	3954	3879	3809	3869	3930	1108
25°	2846	2762	2708	2760	2806	1271
35°	967	1194	1580	1180	948	643
45°	180	230	356	228	177	156
55°	24	24	34	24	22	24
65°	8	8	8	8	8	9
75°	3	3	3	3	3	4
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5098.4	5098.4	5098.4	5098.4	5098.4
1°	5083.0	5083.0	5083.0	5096.7	5096.7
2°	5067.7	5064.3	5055.8	5066.0	5071.1
3°	5004.7	5011.5	5014.9	5009.8	4997.9
4°	4940.0	4933.2	4951.9	4940.0	4929.8
5°	4871.9	4858.3	4863.4	4856.6	4856.6
6°	4776.5	4793.6	4779.9	4768.0	4761.2
7°	4672.7	4686.3	4677.8	4660.7	4648.8
8°	4590.9	4582.4	4568.8	4565.4	4544.9
9°	4512.6	4481.9	4451.3	4456.4	4461.5
10°	4386.6	4390.0	4327.0	4374.7	4383.2
11°	4333.8	4315.1	4231.6	4270.8	4284.4
12°	4257.2	4197.6	4126.0	4158.4	4183.9
13°	4146.5	4085.2	4020.5	4069.8	4095.4
14°	4063.0	3993.2	3911.5	3974.5	4027.3
15°	3954.0	3879.1	3809.3	3868.9	3930.2
16°	3858.7	3771.8	3702.0	3759.9	3851.9
17°	3775.2	3668.0	3582.8	3644.1	3732.7
18°	3678.2	3553.9	3475.5	3540.3	3640.7
19°	3570.9	3444.9	3375.1	3427.9	3543.7
20°	3490.9	3349.5	3266.1	3317.2	3467.0
22.5°	3204.8	3056.6	2980.0	3041.3	3160.5
25°	2845.5	2762.0	2707.6	2760.3	2806.3
27.5°	2419.8	2419.8	2438.5	2416.4	2402.7
30°	1903.8	2041.7	2178.0	2034.9	1871.4
32.5°	1389.5	1610.9	1885.1	1639.9	1387.8
35°	967.2	1193.7	1580.3	1180.1	948.5
37.5°	672.6	822.5	1246.5	831.0	664.1
40°	447.9	551.7	914.4	561.9	444.4
42.5°	292.9	364.4	590.9	366.1	286.1
45°	180.5	229.9	355.9	228.2	177.1
47.5°	105.6	136.2	207.7	137.9	103.9
50°	52.8	80.0	117.5	78.3	52.8
52.5°	30.7	42.6	64.7	40.9	30.7
55°	23.8	23.8	34.1	23.8	22.1
57.5°	18.7	18.7	18.7	18.7	17.0
60°	13.6	15.3	13.6	13.6	13.6
62.5°	11.9	11.9	10.2	11.9	10.2
65°	8.5	8.5	8.5	8.5	8.5
67.5°	6.8	6.8	6.8	6.8	6.8
70°	5.1	5.1	5.1	5.1	5.1
72.5°	3.4	5.1	3.4	5.1	5.1
75°	3.4	3.4	3.4	3.4	3.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	1.7	1.7	1.7	1.7	1.7
85°	1.7	1.7	1.7	1.7	1.7
87.5°	1.7	1.7	1.7	1.7	1.7
90°	0.0	0.0	0.0	0.0	0.0

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

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77.5°	3.4	3.4	3.4	3.4	1.7
80°	1.7	1.7	1.7	1.7	1.7

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